UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/010,330	11/08/2001	Kenji Takeda	P/1139-108	5814

7590　　07/26/2005	EXAMINER
Dickstein, Shapiro, Morin & Oshinsky LLP	ROBERTS, BRIAN S

1177 Avenue of the Americas		
41 st floor	ART UNIT	PAPER NUMBER
New York, NY 10036-2714	2662	

DATE MAILED: 07/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

Office Action Summary	Application No.	Applicant(s)
	10/010,330	TAKEDA, KENJI
	Examiner	**Art Unit**	
	Brian Roberts	2662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on _08 November 2001_.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _1-15_ is/are pending in the application.

     4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) _1-15_ is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☒ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on _08 November 2001_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a)☒ All   b)☐ Some * c)☐ None of:

       1. ☒ Certified copies of the priority documents have been received.

       2. ☐ Certified copies of the priority documents have been received in Application No. _____.

       3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
     Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
     Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

1.   Applicant's Amendment filed 11/08/2001 is acknowledged.

Claims 1-15 have been examined.

Specification

2.   The title of the invention is not descriptive. A new title is required that is clearly

indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 112

3.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

4.   Claims 1-2, 7, and 12 are rejected under 35 U.S.C. 112, second paragraph, as

being indefinite for failing to particularly point out and distinctly claim the subject matter

which applicant regards as the invention.

-   In reference to claim 1

Claim 1 states the limitation "judges that the data packet..." It is unclear and

undefined what "judges" because the claim fails to state a means for judging.

-   In reference to 2

Claim 2 states the limitation "counter value" in lines 7, 12 and 14. It is unclear

whether the counter value is the current counter value or the stored counter value.

- In reference to claim 7

Claim 6 states the limitation "counter value" in lines 7, 10 and 13. It is unclear

whether the counter value is the current counter value or the stored counter value.

- In reference to claim 12

Claim 12 is rejected because it depends from claim 7.

Claim Rejections - 35 USC § 103

5.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6.   Claims 1-3, 5-8, 10-13 and 15 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Ayanoglu et al. (US 5570367) in view of Stallings.

- In reference to claims 1, as best understood, and 6, 11

Ayanoglu et al. teaches a data communication system, a data communication

method and computer program that includes:

- A packet with a header which includes a packet identification number (column

  3 lines 24-25)

- Generating packet identification numbers in a sequential manner inherently

  with a counter (column 3 lines 24-28)

- Recording the packet identification number in a status array (column 3 lines 37-43)

- Retransmission of packets that are lost (abstract)

Ayanoglu et al. does not teach judging a packet to be lost when stored counter value is two or more smaller than the current counter value.

Stallings teaches a transmission control protocol implementing a fixed sliding-window scheme. (page 550) fixed sliding-window of two prevents more than two packets being sent without receiving an acknowledgement for each of the two packets.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the system and method of Ayanoglu et al. to include fixed sliding-window as taught by Stallings to retransmit a packet when the packet identification numbers stored in the status array is two or more smaller than the sequence counter because a transmission window provides for a more efficient bandwidth utilization by allowing multiple packets to be transmitted rather than transmitting a packet than waiting for the packet to be acknowledged before transmitting a subsequent packet.

- In reference to claims 2, 7 and 12, as best understood

Ayanoglu et al. teaches a data communication system, method and computer program that covers substantially all limitations of the parent claim. Ayanoglu et al. further teaches:

- A packet with a header which includes a packet identification number (column 3 lines 24-25)

- A status message which acknowledges reception of packets transmitted and contains the packet identification number of the packet (column 5 lines 4-8)

Ayanoglu et al. does not explicitly teach incrementing the counter by one when the packet identification number equals the stored packet identification number.

Stallings teaches a transmission control protocol implementing a fixed sliding-window where the counter is increased by one to allow transmission of a subsequent data packet when an ACK packet is received corresponding to a stored sequence number. (page 550)

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the system and method of Ayanoglu et al. to include a fixed sliding-window as taught by Stallings because a transmission window provides for a more efficient bandwidth utilization by allowing multiple packets to be transmitted rather than transmitting a packet than waiting for the packet to be acknowledged before transmitting a subsequent packet.

- In reference to claims 3, 8 and 13

Ayanoglu et al. teaches a data communication system, method and computer program that includes:

- A packet with a header which includes a packet identification number (column 3 lines 24-25)

- Generating packet identification numbers in a sequential manner inherently with a counter (column 3 lines 24-28)

- Generating a transmission time inherently with a clock

- Recording the packet identification number and transmission time in a status array (column 3 lines 37-43)

- Retransmission of packets that are lost (abstract)

Ayanoglu et al. does not teach judging a packet to be lost when stored counter value is two or more smaller than the current counter value.

Stallings teaches a transmission control protocol implementing fixed sliding-window. (page 550) A fixed sliding-window of two prevents more than two packets being sent without receiving an acknowledgement for each of the two packets.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the system and method of Ayanoglu et al. to include fixed sliding-window as taught by Stallings to retransmit a packet when the transmission time of a packet stored in the status array is two smaller than the clock corresponding to the counter value because the transmission time is simply another way to identify an individual packet and a transmission window provides for a more efficient bandwidth utilization by allowing multiple packets to be transmitted rather than transmitting a packet than waiting for the packet to be acknowledged before transmitting a subsequent packet.

- In reference to claims 5, 10 and 15

Ayanoglu et al. teaches a data communication system, method and computer program that includes:

- Maintaining a window using a lower end pointer and an upper end pointer that defines the lowest numbered packet transmitted and acknowledged and the highest numbered packet transmitted

Ayanoglu does not explicitly teach the data transmitter functioning to release from the transmission window, a closed window to an extent corresponding to the total size of data, for which delivery confirmation has been newly made by ACK packets received from the data receiver during the error control, thereby rendering the released window transmittable.

Stallings teaches the use of a fixed sliding-window scheme that includes

- The use of sequence numbers on data units

- The use of a window of fixed size

- The use of acknowledgements to advance the transmission window where the transmission window is advanced according to the ACK packet received

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the system and method of Ayanoglu et al. to include a fixed sliding-window scheme as taught by Stallings because a transmission window provides for a more efficient bandwidth utilization by allowing multiple packets to be transmitted rather than transmitting a packet than waiting for the packet to be acknowledged before transmitting a subsequent packet.

7.   Claims 4, 9, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Ayanoglu et al. (US 5570367) in view of Stallings and further in view of Hamiti et al.

(US 6751209)

-   In reference to claims 4, 9 and 14

Ayanoglu et al. teaches a data communication system, method and computer

program that covers substantially all limitations of the parent claim. Ayanoglu et al.

further teaches:

- A packet with a header that includes a packet identification number (column 3

    lines 24-25)

- A status message which acknowledges reception of packets transmitted and

    contains the packet identification number of the packet (column 5 lines 4-8)

Ayanoglu et al. does not teach judging a packet to be lost when stored time in an

ACK packet is equal to or larger than the current time value stored.

Stallings teaches a transmission control protocol implementing a fixed sliding-

window where the counter is increased by one to allow transmission of a subsequent

data packet when an ACK packet is received corresponding to a stored sequence

number. (page 550)

It would have been obvious to a person of ordinary skill in the art at the time of

the invention to modify the system and method of Ayanoglu et al. to include a fixed

sliding-window as taught by Stallings because a transmission window provides for a

more efficient bandwidth utilization by allowing multiple packets to be transmitted rather

than transmitting a packet than waiting for the packet to be acknowledged before transmitting a subsequent packet.

The combination of Ayanoglu et al. and Stallings teaches a data communication system, method and computer program that covers substantially all limitations of the parent claim.

The combination of Ayanoglu et al. and Stallings does not teach inserting the transmission time into a packet.

In Figure 3, Hamiti et al. teaches inserting a time field (317) into a packet.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the data packet and status message of Ayanoglu et al. where the transmission time is recorded and insert the transmission time into a time field as taught by Hamiti et al. because the transmission time is simply another way to identify a individual packet since the transmission time for each packet is unique.

Conclusion

8.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure are:

- Stewart et al. (US 66134221) teaches a method for evaluating a communication link between a first and a second communication site involving a first and second counter and threshold.

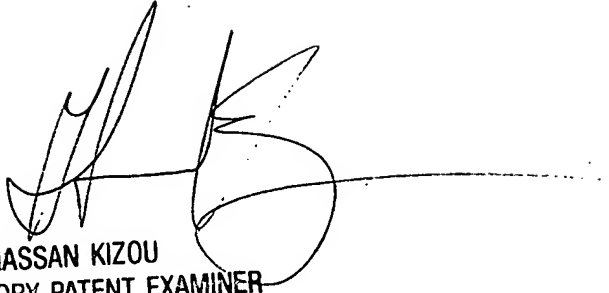- Chan et al. (US 6049833) teaches mapping a SNA session flow control to TCP flow control.

- Chapman et al. (US 6246684) teaches a method and apparatus for re-ordering data packets containing a sequence number and time field in a network environment.

- Keen (US 5664091) teaches a method and system for voiding unnecessary retransmissions using a selective rejection data link protocol.

- Elgamal et al. (US 5657390) teaches a sequence number counter.

- Le (US 6680955) teaches a compression technique for header field in a data packet in a Real-Time Transfer Protocol (RTP) system.

9.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Roberts whose telephone number is (571) 272-3095. The examiner can normally be reached on M-F 8:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (571) 272-3088. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BSR
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